

Remarks

Claims 1-19 and 21-24 are pending in this application. Applicants have amended claims 1, 7 and 14-19 and added claim 24 to clarify the claimed invention. Applicants respectfully request favorable reconsideration of this application.

The Examiner objected to the specification as not supporting the recitation of the modules recited in claims 14-18. Applicant has amended claims 14-18 to clarify the claimed invention. The specification, for example, at pages 12-14 describes various units and devices recited in claims 14-18. The specification may not use the term "module". However, there is no necessity for the specification to verbatim describe a claimed invention. The specification clearly supports the invention recited in claims 14-18. Accordingly, Applicants respectfully request withdrawal of the objection to the specification.

The Examiner rejected claim 14 under 35 U.S.C. § 112, second paragraph. Applicants have amended claim 12 to ensure that antecedent basis exists for "measured data". Applicants submit that claim 14 complies with 35 U.S.C. § 112, second paragraph, and respectfully request withdrawal of this rejection.

The Examiner rejected claims 14-18 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Applicants submit that claims 14-18 are not directed to software per se. For example, claim 14 recites a flatness measurement device, a visualization device, and a comparison device. All of these are physical devices. Accordingly, claims 14-18 recite statutory

subject matter and Applicants respectfully request withdrawal of this rejection.

The Examiner rejected claims 19, 21, and 22 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Applicants submit that claims 19, 21, and 22 are not directed to a signal. Claim 19 recites a computer readable medium. Page 19, lines 16-20 clearly describe that computer program instructions may be "contained in a computer program storage device." Transmission of the instructions over a network does not make the computer readable medium a signal. Claim 19, from which claims 21 and 22 depend, clearly recites a computer readable medium. Accordingly, claims 19, 21, and 22 recite statutory subject matter and Applicants respectfully request withdrawal of this rejection.

The Examiner rejected claims 1-4, 7-9, 12-16, 18, and 19 under 35 U.S.C. § 103(a) as being unpatentable over 5,535,129 to Keijser in view of U.S. patent 4,736,305 to Watanabe. The Examiner rejected claims 5 and 10 under 35 U.S.C. § 103(a) as being unpatentable over Keijser in view of Watanabe and further in view of U.S. patent 6,411,862 to Hazama et al. The Examiner rejected claims 6 and 23 under 35 U.S.C. § 103(a) as being unpatentable over Keijser in view of Watanabe and further in view of U.S. patent 4,551,805 to Shimoda et al. The Examiner rejected claim 11 under 35 U.S.C. § 103(a) as being unpatentable over Keijser in view of Watanabe and further in view of U.S. patent 5,287,433 to Prunotto et al. The Examiner rejected claims 21 and 22 under 35 U.S.C. § 103(a) as being unpatentable over Keijser in view of Watanabe and further in view of U.S. patent 6,463,352 to Tadokoro et al.

The combination of Keijser and Watanabe does not suggest the invention recited in

claims 1-4, 7-9, 12-16, 18, and 19 since, among other things, the combination does not suggest a method for optimizing measurement and control of the flatness of a strip of rolled material, that includes obtaining a visual image of the strip and determining a relevant flatness fault type by comparing the visual image to one or more reference strip models for known flatness fault types. It appears as if phi function generators 4-6 shown in the figure of Keijser suggests visualization of a strip. Rather, the phi function generators 4-6 are graphical representations of a function generator to generate stress distribution. The stress distributions may be calculated or measured by a measuring roll, as described at col. 2, line 33 of Keijser.

Nowhere does Keijser include any suggestion that a visual image of a strip is obtained. While page 5, paragraph 8 of the office action asserts that Keijser suggests that an operator has visual access to a strip, neither of the passages cited by the office action suggest any visual access by an operator of a strip. In fact, Keijser does not utilize operator visual access since Keijser suggests a process that proceeds automatically.

Keijser suggests utilizing a measurement device to generate a flatness curve compared to a target flatness profile or flatness reference. Keijser uses the flatness errors, or vector, to determine three variables (C_s, C_b, C_f) which control the flatness control in the rolling process.

Watanabe also does not suggest obtaining a visual image of a strip. While the office action asserts that Fig 4 suggests strip visualization, Fig 4 is not a visualization of the strip but rather a graph displaying values of different parameters at different stands in a beginning and at an end of a rolling process.

The invention recited in claim 1 not only includes obtaining a visual image of the strip, but also determining a relevant flatness fault type by comparing the visual image to one or more reference strip models for known flatness fault types. Since neither Keijser nor Watanabe suggests obtaining a visual image of a strip, it follows that neither Keijser nor Watanabe can suggest comparing the visual image to one or more reference strip models for known flatness fault types.

In view of the above, the combination of Keijser and Watanabe does not suggest the invention recited in claims 1-4, 7-9, 12-16, 18, and 19 and Applicants respectfully request withdrawal of this rejection.

The combination of Keijser, Watanabe and Hazama et al. does not suggest the invention recited in claims 5 and 10 since, among other things, the combination does not suggest a method for optimizing measurement and control of the flatness of a strip of rolled material, that includes obtaining a visual image of the strip and determining a relevant flatness fault type by comparing the visual image to one or more reference strip models for known flatness fault types. Hazama et al. only suggests displaying a model of an object to be produced. Hazama et al. does not suggest obtaining a visual image of a strip. Therefore, the combination of Keijser, Watanabe and Hazama et al. does not suggest the invention recited in claims 5 and 10 and Applicants respectfully request withdrawal of this rejection.

The combination of Keijser, Watanabe and Shimoda et al. does not suggest the invention

recited in claims 6 and 23 since, among other things, none of Keijser, Watanabe or Shimoda et al. suggests a method for optimizing measurement and control of the flatness of a strip of rolled material, that includes obtaining a visual image of the strip and determining a relevant flatness fault type by comparing the visual image to one or more reference strip models for known flatness fault types. It would not have been obvious to visualize a strip or compare the visualization to a reference since none of Keijser, Watanabe or Shimoda et al. suggests obtaining a visual image of a strip and subsequent use of the visualization. Accordingly, the combination of Keijser, Watanabe and Shimoda et al. does not suggest the invention recited in claims 6 and 23 and Applicants respectfully request withdrawal of this rejection.

The combination of Keijser, Watanabe and Prunotto et al. does not suggest the invention recited in claim 11 since, among other things, none of Keijser, Watanabe or Prunotto et al. suggests a method for optimizing measurement and control of the flatness of a strip of rolled material, that includes obtaining a visual image of the strip and determining a relevant flatness fault type by comparing the visual image to one or more reference strip models for known flatness fault types. The video suggested by Prunotto et al. is not a visualization of the strip and is not utilized as recited in claim 1, from which claim 11 depends. It would not have been obvious to obtain a visual image of the strip or compare the visual image to a reference since none of Keijser, Watanabe or Prunotto et al. suggests obtaining a visual image a strip and subsequent use of the visual image. Accordingly, the combination of Keijser, Watanabe and Prunotto et al. does not suggest the invention recited in claim 11 and Applicants respectfully request withdrawal of this rejection.

The combination of Keijser, Watanabe and Tadokoro et al. does not suggest the invention recited in claims 21 and 22 since, among other things, none of Keijser, Watanabe or Tadokoro et al. suggests a method for optimizing measurement and control of the flatness of a strip of rolled material, that includes obtaining a visual image of the strip and determining a relevant flatness fault type by comparing the visual image to one or more reference strip models for known flatness fault types. Claim 19, from which claims 21 and 22 depend, clearly recites obtaining a visual image of the strip and relating the visual image to the other elements of the method recited therein. Tadokoro et al. only suggests transmitting data. It would not have been obvious to obtain a visual a strip or compare the visual image to a reference since none of Keijser, Watanabe or Tadokoro et al. suggests obtaining a visual image of the strip and subsequent use of the visual image. Accordingly, the combination of Keijser, Watanabe and Tadokoro et al. does not suggest the invention recited in claims 21 and 22 and Applicants respectfully request withdrawal of this rejection.

In view of the above, the references relied upon in the office action do not suggest patentable features of the claimed invention. Therefore, the references relied upon in the office action do not make the claimed invention obvious. Accordingly, Applicants respectfully request withdrawal of the rejections based upon the cited references.

In conclusion, Applicants respectfully request favorable reconsideration of this case and early issuance of the Notice of Allowance.

If an interview would advance the prosecution of this application, Applicants respectfully

urge the Examiner to contact the undersigned at the telephone number listed below.

The undersigned authorizes the Commissioner to charge fee insufficiency and credit overpayment associated with this communication to Deposit Account No. 22-0261.

Respectfully submitted,

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